TITLE 25 HEALTH SERVICES
PART 1 DEPARTMENT OF STATE HEALTH SERVICES
CHAPTER 265 GENERAL SANITATION
SUBCHAPTER K ARTIFICIAL SWIMMING LAGOONS

§265.151 General Provisions

(a) Scope and purpose. These rules address minimum standards for the design and construction of artificial swimming lagoons. These rules also establish minimum operating standards for artificial swimming lagoons to assure proper filtration, chemical and maintenance of the water for the safety of users, and to reduce to a practical minimum the possibility of drowning or injury to users. These rules are authorized by Texas Health and Safety Code, §341.002, to implement Texas Health and Safety Code, §341.06(g) and are considered good public health engineering practices.

(b) Application of the rules. Sections of these rules will apply either to artificial swimming lagoons constructed on or after the effective date of these rules or to all artificial swimming lagoons regardless of the date of construction. The rules that apply only to artificial swimming lagoons constructed on or after the effective date of these rules will so state within that rule. All other rules will apply to all lagoons regardless of construction date.

(c) Date of Construction. The date of constructions is considered constructed on the date that a building permit for construction is issued by a municipality or, if no building permit is required, the artificial swimming lagoon owner/operator must produce adequate written documentation of the date that excavation or electrical service begins, whichever is first.

(d) Stricter codes and standards. The standards contained in these rules shall be met notwithstanding minor variations in equipment, materials, or design if:

(1) the variation provides the quality, strength and durability equal to or greater than the standards contained in these rules; and

(2) the operation, maintenance, safety, and sanitation of the artificial swimming lagoon are not adversely affected by the variation.

(e) Local regulatory authority. Where a local regulatory authority has jurisdiction for the regulation of artificial swimming lagoon, such authorities may, with the exception of department approved alternate methods of disinfectant, adopt standards that vary from these standards; however, such standards shall be equivalent to or more stringent than these standards and shall be in accordance with good public health engineering and safety practices.

§265.152. Definitions

(1) AED--An Automated External Defibrillator that automatically diagnoses the life-threatening cardiac arrhythmias of ventricular fibrillation and pulseless ventricular tachycardia,

and is able to treat those conditions by application of electricity which stops the arrhythmia, allowing the heart to re-establish an effective rhythm.

(2) Alternative method of disinfectant--Method of disinfection required to be approved by the Texas Department of State Health Services.

(3) Alternative communication system--Devices that alert multiple on-site staff when activated, such as pager systems, radios, or walkie-talkie communication systems. Used to notify either on-site EMS, on-site medical staff, or on-site certified staff such as lifeguards, or a commercial emergency monitoring service.

(4) ANSI--American National Standards Institute

(5) APSP--Association of Pool and Spa Professionals.

(6) ARC--American Red Cross

(7) Artificial swimming lagoon (lagoon)--Artificial body of water used for recreational purposes with more than 20,000 square feet of surface area, an artificial liner, and a method of disinfectant. The term does not include a body of water open to the public that continuously recirculates water from a spring or a pool.

(8) Artificial swimming lagoon yard--Area that has an enclosure that contains the artificial swimming lagoon.

(9) Artificial swimming lagoon enclosure--A fence, wall, or combination of fences, walls, gates, or doors that completely surround an artificial swimming lagoon.

(10) ASME--American Society of Mechanical Engineers.

(11) ASPSA--American Swimming Pool and Spa Association.

(12) Assistance animal--A canine that is specially trained or equipped to help a person with a disability and that is used by a person with a disability, in accordance with the Human Resources Code §121.002, Definitions. Other species of animals, whether wild or domestic, trained or untrained are not considered service animals. (See paragraph (56) “Service animal.”)

(13) Australian standard AS 4663-2013--A method to measure the slip resistance of pedestrian surfaces.

(14) Backflow prevention device--Device that is designed to prevent a physical connection between a potable water system and a non-potable source such as an artificial swimming lagoon, or a physical connection between an artificial swimming lagoon and a sanitary sewer or wastewater disposal system.

(15) Bonded--Permanent joining of metallic parts to form an electrically conductive path that will ensure electrical continuity and the capacity to conduct safely any current likely to be imposed in order to minimize the risk of electrocution.

(16) Broken stripe--Horizontal stripe that is at least 1-inch wide with uniform breaks in the stripe, with the breaks totaling not more than 75% of the length of the stripe and stripe breaks.

(17) BVM (Bag Valve Mask)--Handheld device used to provide positive pressure ventilation to persons who are not breathing adequately. Also known by its proprietary name, Ambu bag.

(18) Chemical feeder--Mechanical or electronic device for applying chemicals into an artificial swimming lagoon.

(19) Circulation equipment--Mechanical components that are part of a circulation system on an artificial swimming lagoon. Circulation equipment includes pumps, hair and lint strainers, filters, valves, gauges, meters, heaters, surface skimmers, inlet/outlet fittings, underdrain and dewatering systems, and chemical feeding devices.

(20) Circulation system--Arrangement of mechanical equipment, components, and circulation equipment connected by piping to an artificial swimming lagoon in a closed circuit.

(21) Cross-connection control device--A device that is designed to prevent a physical connection between a potable water system and a non-potable source such as an artificial swimming lagoon, or a physical connection between an artificial swimming lagoon and a sanitary sewer or wastewater disposal system. (See paragraph (16) “Backflow prevention device.”)

(22) DCOF AcuTest--A test used to evaluate the slip resistance or Dynamic Coefficient of Friction (DCOF) of a tile surface under known conditions using a standardized sensor prepared according to a specific protocol.

(23) Decks--Areas immediately adjacent to or attached to the artificial swimming lagoon that are specifically constructed or installed for sitting, standing or walking and can include the coping.

(24) Deep areas--Water levels in an artificial swimming lagoon that are over 5 feet in depth.

(25) Department--The Texas Department of State Health Services.

(26) Depth--Vertical distance measured at 3 feet from the artificial lagoon wall or barrier from the bottom of the lagoon to the design water level.

(27) Design water level--

(A) For a skimmer system, the midpoint of the operating range of the skimmers.

(B) For a gutter or overflow system, the top of the overflow rim of the gutter or overflow system.

(28) Disinfectant--Energy, chemicals, or a combination of both used to kill undesirable or pathogenic (disease causing) organisms, and having a measurable residual or level adequate to make the desired kill.

(29) Diving board--Recreational mechanism for entering the artificial swimming lagoon, consisting of a semi-rigid board that derives its elasticity through the use of a fulcrum mounted below the board.

(30) DPD--Chemical testing reagent (N,N-Diethyl-P-Phenylenediamine) used to measure the levels of free chlorine or bromine in water by yielding a series of colors ranging from light pink to dark red.

(31) Dynamic coefficient of friction (DCOF)--A measurement of frictional resistance of a surface one pushes against when already in motion.

(32) Free available chlorine (FAC)--Portion of the total chlorine remaining in chlorinated water that is not combined with ammonia or nitrogen compounds and that will react chemically with undesirable or pathogenic organisms. Combined chlorine plus free chlorine equals total chlorine.

(33) Facility(ies)--The artificial swimming lagoon, restrooms, dressing rooms, equipment rooms, deck or walkways, beach entries, enclosure and other appurtenances directly serving the artificial swimming lagoon.

(34) Filter--Device that removes undissolved particles from water by recirculating the water through a porous substance (filter media or element).

(35) Filter media--A finely graded material (for example, sand, diatomaceous earth, polyester fabric, or anthracite) that removes filterable particles from the water.

(36) FINA—Fédération de Internationale de Natation, the organization that administers international competition in aquatic sports.

(37) Lifeguard--An expert swimmer who supervises the safety and rescue of swimmers, surfers, and other water sports participants and who has successfully completed and holds a current ARC certificate or the equivalent certification from and an aquatic safety organization, which includes training in CPR for adults, infants, and children, use of an AED, use of a BVM and First Aid.

(38) Licensed engineer--A person licensed to engage in the practice of engineering in the State of Texas in accordance with the Texas Engineering Practice Act, Texas Occupations Code, Chapter 1001, and related rules.

(39) Licensed master electrician--An individual, licensed as a master electrician, who on behalf of an electrical contractor, electrical sign contractor, or employing governmental entity, performs "Electrical Work" as defined by Texas Occupations Code, §1305.

(40) Local regulatory authority--A county or municipality.

(41) Motorboat--Any vessel propelled or designed to be propelled by machinery, whether or not the machinery is permanently or temporarily affixed or is the principal source of propulsion. (See paragraph (66) “Vessel.”)

(42) Non-swimming area--Section of the lagoon used by vessels or motorboats, or for other aquatic activities such as surfing and wakeboarding.

(43) NSF 50 or NSF/ANSI Standard 50--Standard establishing minimum requirements for materials, design, construction and performance of equipment commonly included in the water circulation systems of residential and public swimming pools, spas or hot tubs.

(44) NSF 60 or NSF/ANSI Standard 60--Standard covering drinking water treatment chemicals and establishing criteria for promoting sanitation and protection of public health in relation to drinking water.

(45) ORP--Oxidation Reduction Potential. Potential level of oxidation-reduction produced by strong oxidizing (sanitizing) agents in a water solution. Oxidation level is measured in millivolts by an ORP meter.

(46) Overflow system--Overflows, surface skimmers, and surface water collection systems of various design and manufacture for removal of surface water from the artificial swimming lagoon.

(47) pH--Value expressing the relative acidic or basic tendencies of a substance such as water on a scale from 0 to 14, with 7.0 being neutral; values less than 7.0 being acidic, and values greater than 7.0 being basic.

(48) Pump--Mechanical device, usually powered by an electric motor, that causes hydraulic flow and pressure for the purpose of filtration, heating, and circulation of the water in an artificial swimming lagoon.

(49) Regulatory authority--A federal or state agency or a local regulatory authority.

(50) Rescue tube--a piece of lifesaving equipment that is an essential part of the equipment that must be carried by lifeguards and that is used to make water rescue easier by helping help support the victim's and rescuer's weight.

(51) Return inlet or inlet--Aperture or fitting through which the water under positive pressure returns into the artificial swimming lagoon.

(52) Ring buoy--Ring-shaped floating buoy capable of supporting a user.

(53) Rope and float line--Continuous line that is not less than ¼ inch in diameter and that is supported by buoys and attached to sides of the artificial swimming lagoon to separate swimming areas from non-swimming areas of the lagoon.

(54) Secchi disk--An 8-inch dimeter disk with alternating black and white quadrants that is lowered in the water column and is used to measure water turbidity and clarity.

(55) Self-closing and self-latching device--Mechanism on a gate that enable a gate to automatically fully close and latch without human or electrical power.

(56) Service animal--A canine that is specially trained or equipped to help a person with a disability and that is used by a person with a disability in accordance with the Texas Human Resources Code §121.002. Other species of animals, whether wild or domestic, trained or untrained are not considered service animals. (See paragraph (12)"Assistance animal.")

(57) Slide--Recreational feature with a flow of water and an inclined flume or channel by which a rider is conveyed downward into the artificial swimming lagoon.

(58) Slip resistant--A surface that has been treated or constructed to significantly reduce the chance of slipping.

(59) Steps, recessed steps, ladders, and recessed treads --Means of artificial swimming lagoon ingress and egress that may be used separately or in conjunction with one another.

(60) Suction outlet--A fitting, fitting assembly, cover/grate, and related components that provide a localized low pressure area for the transfer of water from an artificial swimming lagoon.

(61) Swimming area--Section of the lagoon used for swimming, wading, or other water activities involving contact with or immersion in water.

(62) TCEQ--Texas Commission on Environmental Quality.

(63) Underwriters Laboratory (UL)--Independent testing laboratory.

(64) User load--Number of persons in the artificial swimming lagoon at any given moment or during any stated period of time.

(65) VGBA--The Virginia Graeme Baker Pool and Spa Safety Act, a federal law that requires all public pools and spas to be fitted with suction outlets that meet the ASME/ANSI A112.19.8 standard.

(66) Vessel--Any watercraft including surf boards, paddleboards, and wakeboards, other than a seaplane on water, used or capable of being used for transportation on water.

(67) Waste water disposal system--A plumbing system used to dispose of backwash or other water from an artificial swimming lagoon or from dressing rooms and other facilities association with the lagoon.

(68) Water lounge or shelf--Horizontal area of an artificial swimming lagoon that adjoins the lagoon wall at a depth of from 2 inches to 10 inches and is used for seating and play.

Section 265.153 Plans, Permits and Instructions

(a) Licensed Engineer required. Artificial swimming lagoons constructed on or after the effective date of these rules shall be planned and designed by a licensed engineer.

(b) Plans and permits. The department may review plans for artificial swimming lagoons to ensure compliance with these rules. Regardless of whether a regulatory authority requires plans or permits, artificial swimming lagoons shall be designed, constructed, and operated in compliance with these standards.

(c) Operational instructions. Upon completion of construction, the owner shall obtain from the builder complete written operational instructions for the artificial swimming lagoon. Written instructions shall include items such as procedures for filtration, backwash, cleaning, and operation of all chemical feed devices and general maintenance of the artificial swimming lagoon when applicable. In addition, the builder shall label all valves and exposed piping, including normal operating pressures and pressure differential that indicate the need for cleaning.

Section 265.154 General Construction and Design

(a) Non-toxic and sound materials. Artificial swimming lagoons and all appurtenances shall be constructed of materials that are nontoxic to humans and the environment, are impervious and enduring, will withstand design stresses; and will provide a watertight structure with a smooth and easily cleanable surface without cracks or joints that are not water-tight and easily cleanable.

(b) NSF 50. Where equipment in an artificial swimming lagoon, such as pumps, filters, skimmers, chemical feeders, and other equipment, falls within NSF/ANSI Standard 50 such equipment shall meet the standard as confirmed by a testing laboratory. Conformity with the NSF 50 shall be evidenced by the listing or labeling of such equipment by such a laboratory or by separate documentation.

(c) Prohibition of earth material. Earth shall not be permitted as an interior finish in an artificial swimming lagoon. Clean sand or similar material, if used in a beach environment shall only be used over an impervious surface and be designed to perform in such an environment, and controlled so as not to adversely affect the proper circulation, filtration, treatment system, maintenance, safety, sanitation, and operation of the artificial swimming lagoon. If sand or similar material is used in the artificial swimming lagoon, positive upflow circulation through the sand shall be provided as necessary to assure that sanitary conditions are maintained at all time.

(d) Interior color. The color of the interior of an artificial swimming lagoon shall be white or a light enough color so that objects and people in the water shall be easily seen. The finish shall be at least 6.5 on the Munsell color value scale. In areas of the lagoon used for swimming, an 8-inch black disk or a Secchi disk at the deepest point of the floor in the artificial swimming lagoon shall be clearly and immediately seen by an observer.

(e) Materials to withstand freezing temperatures. The artificial lagoon liner or shell and appurtenances, piping, filter system, pump and motor, and other components shall be designed and constructed to facilitate protection from damage due to freezing.

(f) Surface water. Artificial swimming lagoons shall be designed such that surface water does not enter the lagoon.

(g) Interior surface footing. The surfaces within an artificial swimming lagoon intended to provide footing for users shall be slip-resistant to help reduce the chance for a fall. The roughness or irregularity of such surfaces shall not cause injury to feet during normal use.

(h) General shape. These rules are not intended to regulate the perimeter shape of the artificial swimming lagoon. It is the responsibility of the licensed engineer to take into account the effect a given shape of the artificial swimming lagoon will have on the health and safety of the users.

(i) Entanglement or entrapment avoidance. There shall be no protrusions, extensions, means of entanglement or other obstructions in an artificial swimming lagoon that are likely to cause the entrapment or injury of the user.

(j) Maximum users in swimming areas. Maximum user loading in the swimming area shall comply with the following:

(1) In areas of water depth less than 4 feet, the user load shall not exceed one user per 15 square feet of water surface.

(2) In areas of water depth greater than 4 feet, the user load shall not exceed one user per 25 square feet of water surface.

(3) The owner/operator shall be responsible for restricting usage so that the maximum capacity is not exceeded.

(k) Maximum user loads in non-swimming areas. The owner/operator shall determine the maximum user loading in the non-swimming areas by considering the type of use in the non-swimming areas and the presence of motorboats and vessels and shall post signs indicating the maximum number of users.

(l) Floor slopes. For artificial swimming lagoons constructed on or after the effective date of these rules, floor slopes in the swimming area shall comply with the following:

(1) For depths up to 5 feet, the slope shall be uniform and not exceed 1:10.

(2) For depths over 5 feet, the slope shall be uniform and not exceed 1:3.

(3) The slope may vary in limited areas where access for persons with disabilities has been provided.

(m) Underwater seat benches. Underwater seat benches shall:

(1) be constructed with slip-resistant materials;

(2) have a maximum seating width of 18 inches projecting from the wall at a depth not to exceed 20 inches below the design water level;

(3) be located fully outside of the required minimum diving water envelope if the artificial swimming lagoon is used for diving;

(4) be visually set apart and provided with a solid or broken stripe at least 1 inch wide on the top surface along the front leading edge of the bench. The stripe shall be plainly visible to persons on the ground above the bench. The stripe shall be a contrasting color to the background on which it is applied, and the color shall be permanent; and

(5) not be used as a required entry/exit access unless used in conjunction with steps.

(n) Water lounges. Water lounges shall:

(1) be a minimum of 20 inches wide and provide a minimum of 10 square feet of horizontal surface adjoining on the edge of the lagoon over a distance of not less than 3 feet;

(2) be horizontal and at a depth of 2 inches to 10 inches below the water surface;

(3) be visually set apart with a horizontal solid or broken stripe at least 1 inch wide on the top surface along the leading edge of horizontal surfaces of all edges not adjoining the lagoon wall. The stripe shall be plainly visible to persons on the deck. The stripe shall be contrasting color to the background on which it is applied, and the color shall be permanent;

(4) be located fully outside of the required minimum diving water envelope if the lagoon is intended for use with diving equipment;

(5) have a slip-resistant surface; and

(6) be located in water depths of 4 feet or less.

(o) Construction tolerances. Construction tolerances in the deep areas may vary plus or minus 3 inches. All other dimensions may vary plus or minus 2 inches. Construction tolerances for entry/exit step treads and risers may vary plus or minus 1/2 inch.

Section 265.155 Decks, Entry/Exits, Diving Facilities, Slides and Other Aquatic Play Features

(a) Access. Entries and exits, including hand and grab rails, walkways, and docks shall comply with applicable requirements for access to recreation facilities and their elements for persons with disabilities under federal, state, and local fair housing and handicap access laws.

(b) Decks for artificial swimming lagoons. Where decks are provided the following is required:

(1) Decks shall be at least four feet wide.

(2) Deck shall be provided at all entry/exits into the swimming areas.

(3) Unobstructed deck area at least four feet wide shall be provided for access around:

(A) diving equipment,

(B) special feature stairways, such as for a waterslide,

(C) lifeguard stands,

(D) diving boards,

(E) similar deck equipment,

(F) equipment providing access to persons with disabilities, and

(G) structural columns.

(4) In the swimming areas where perimeter deck is non-contiguous and the clearance is not at least four feet, locations for lifeguards to safely access the edge of the artificial swimming lagoon are required.

(5) Decks shall slope away from the lagoon so that water drains into deck drains or to perimeter areas.

(6) Deck drains shall not drain to the lagoon, lagoon gutter, or recirculation systems.

(7) Loose plant material or bedding shall not be permitted within perimeter decks.

(8) Carpet, wood, and artificial turf are prohibited as perimeter deck materials.

(9) Where concrete is used as a deck material, it shall be installed in accordance with the American Concrete Institute ACI Standard 302.1R-15, “Guide for Concrete Floor and Slab Construction” and in accordance with local building codes.

(10) All decks shall have slip resistant, textured finishes that have a minimum dynamic coefficient of friction at lese equal to the requirements of ANSI A137.1-2012 for that installation as measured by the DCOF AcuTest or by the Australian Standard AS 4663-2013.

(11) Continuous watertight expansion joint material shall be provided between perimeter decks and artificial lagoon coping.

(12) Open joints or gaps larger than 3/16 inch or vertical elevations exceeding 1/4 inch in the deck shall be corrected using appropriate fillers.

(c) Acceptable means of entry/exit. Acceptable means of entry/exit include stairs, recessed steps, ladders, ramps, swimouts, lifts, and beach (zero-depth) entry/exit.

(d) Number of entry/exits. A minimum of two entry/exit points are required in each swimming area. A single set of entry/exit steps or a single beach entry extending a minimum of 50% around the perimeter of the swimming area meets the minimum entry/exit requirements.

(e) Beach entry slope. Beach entry slopes shall not exceed 1:10.

(f) Slip resistant surfaces. Steps, ladders, and recessed treads shall have slip resistant surfaces.

(g) Steps. For an artificial swimming lagoon constructed on or after the effective date of these rules, steps shall comply with the following:

(1) Steps shall conform with the most recent edition of the Model Aquatic Health Code (MAHC) in MAHC Sections 4.5.4.5, MAHC Table 4.5.4.5 MAHC Figure 4.5.4.5.1, Figure 4.5.4.5.2, and Figure 4.5.4.5.2.

(2) The bottom riser height may be allowed to taper to zero.

(3) Steps shall not be used underwater to transition between two sections of different depths.

(4) Underwater steps shall be provided with a horizontal solid or broken stripe at least 1-inch wide on the top surface along the front leading edge of each step. This stripe shall be plainly visible to persons standing above the steps. The stripe shall be a contrasting color to the background on which it is applied, and the color shall be permanent in nature and shall be a slip resistant surface.

(h) Handrails. The lagoon shall comply with applicable requirements for access by persons with disabilities under federal, state, and local fair housing and handicap access laws.

(1) Handrails, if removable, shall be installed in such a way that they cannot be removed without the use of tools.

(2) Handrails shall be provided for each set of stairs provided in artificial swimming lagoons constructed on or after the effective date of these rules and shall be constructed of corrosion-resistant materials, and anchored securely.

(3) Upper railing surface. The upper railing surface of handrails shall extend above the deck or at the interface of the water and beach.

(4) Dimensions. Dimensions of handrails not for use by persons with disabilities shall conform to requirements in the most current edition of the Model Aquatic Health Code (MAHC) in MAHC Table 4.5.5.7 and MAHC Figure 4.5.5.7.1.

(i) Floating platforms.

(1) All floating swim platforms and floating dive platforms shall:

(A) be constructed of a non-slip and splinter-resistant material that can be easily cleaned;

(B) have at least one ladder with handles and steps that extend at least 30 inches below water level;

(C) be anchored or secured to keep it in its designated area if a floating platform; and

(D) minimize the risk of entrapment by being be constructed with:

(i) all braces and struts designed to prevent entrapment of users; and either

(ii) a visible minimum 12-inch air space under maximum load; or

(iii) a smooth solid bottom that extends at least 2 feet below the water.

(2) Floating platforms with a perimeter greater than 75 feet shall have a minimum of two ladders with handles and steps that extend at least 30 inches below the water level.

(3) Floating dive platforms less than 20 inches above the water level shall have a minimum of 9 feet of water depth for 16 feet horizontal distance beyond the diving platform.

(4) Floating dive platforms greater than 20 inches above the water level shall be designed and constructed according to minimum dimensions specified by the Fédération Internationale de Natation (FINA) Facilities Rules, 2017–2021.

(j) Slides and other aquatic play features.

(1) Slides and other aquatic play features, such as climbing walls, floating amusement islands, and zip lines, shall be installed according to manufacturer's instructions.

(2) Any aquatic play features that meets the definition of "Amusement ride" in Occupations Code, Chapter 2152 (the Amusement Ride Safety Inspection and Insurance Act) shall comply with that chapter.

(3) Features that meet the definition of a slide in the Consumer Product Safety Commission's Standard for Swimming Pool Slides as published in Title 16 Code of Federal Regulations, Part 1207, shall comply with those standards.

(k) Diving facilities. Diving platforms and diving boards shall be designed and constructed according to standards specified by the Fédération Internationale De Natation Amateur Rules, 2017-2021.

Section 265.156 General Requirements for Circulation Systems

(a) Licensed Engineer. The circulation system of an artificial swimming lagoon constructed on or after the effective date of these rules shall be designed by a licensed engineer.

(b) Complete and uniform circulation. The circulation system shall provide complete and uniform circulation of the water necessary to maintain required water quality.

(c) Access for inspection or repair. Circulation system components shall be accessible for inspection, servicing, repair, or replacement and shall be installed in accordance with manufacturer's specifications.

(d) Non-toxic materials. The circulation system piping and fittings shall be non-toxic, and shall be of materials able to withstand operating pressures and conditions. Polyvinyl chloride pipe shall bear the NSF seal for potable water and be schedule 40 or stronger.

(e) Operation and maintenance instructions. Circulation system operation and maintenance instructions shall be provided to the operator of the artificial swimming lagoon. A copy of the instructions shall be kept in the building housing the circulation system.

(f) Gauges and meters. The circulation system shall be equipped with:

(1) a filter inlet pressure gauge on each filter;

(2) a filter outlet gauge on each filter; and

(3) a flow meter located to show the rate of flow through each filter in gallons per minute and that is represented by the manufacturer to be accurate within 10% of the true flow rate.

(g) Labeling of exposed piping. Exposed piping in artificial swimming lagoons shall be labeled to identify the piping function and direction of flow. The name of the liquid or gas and arrows indicating direction of flow shall be permanently indicated on the pipe.

Section 265.157 Filters

(a) NSF/ANSI standards. Filters for lagoons constructed on or after the effective date of these rules shall be listed and labeled to NSF/ANSI Standard 50 or NSF/ANSI Standard 60. Filters at lagoons constructed before the effective date of these rules and that are replaced shall be listed and labeled to NSF/ANSI Standard 50 or NSF/ANSI Standard 60.

(b) Filters cleanable. For artificial swimming lagoons constructed on or after the effective date of these rules, filters shall be designed so that after cleaning according to manufacturer's instructions the system provides the required water clarity.

(c) Observable waste discharge. Filters shall have a readily observable free fall or sight glass installed on the waste discharge line in order that the filter washing progress may be observed. Sight glasses shall be readily removable for cleaning.

(d) Filters accessible. Filters shall be installed so that filtration surfaces are accessible for inspection and service in accordance with manufacturer's instructions.

(e) Operation and maintenance instructions. Filters and separation tanks shall have operation and maintenance instructions permanently installed on the filter or separation tank. Maintenance instructions shall be unobstructed and clearly visible.

Section 265.158 General Requirements for Pumps and Motors

(a) Safe pump operation. The installation of the pump(s) and component parts shall provide safe operation in accordance with manufacturer's instructions.

(b) UL and NEMA requirements. Pumps shall comply with Underwriters Laboratories or National Electrical Manufacturers Association requirements.

(c) Backflow prevention. Any priming device for a pump receiving piped water from a public water supply providing potable water shall be isolated from the potable supply by means of a cross-connection control device (backflow prevention device) approved by the TCEQ or local regulatory authority.

(d) Backflow prevention assembly testing. All backflow prevention assemblies shall be tested upon installation by a licensed backflow prevention assembly tester and certified to be operating within specifications. Backflow prevention assemblies shall be tested and certified to be operating within specifications at least annually by a licensed backflow prevention assembly tester. Documentation of testing and certification shall be kept for at least three years and shall be provided during an inspection.

(e) Pumps and motors. Pumps and motors provided for circulation of water shall meet the filter design range of flow required for filtering and cleaning the filters against the total dynamic head developed by the complete system and to meet required water clarity.

(f) Cleanable strainer or screen. Pumps, except those with a vacuum filter, shall have a cleanable strainer or screen upstream of the circulation pump(s) to remove waste that shall be readily accessible and cleaned as per manufacturer's instructions.

(g) Motors. Motors shall:

(1) have an open, drip-proof enclosure as defined by the National Electrical Manufacturers Association Standard MG1-2016, or subsequent standard, and be constructed electrically and mechanically to perform satisfactorily and safely under the conditions of load and environment normally encountered in artificial swimming lagoon installations. Motors shall comply with UL requirements.

(2) be capable of operating the pump under full load with a voltage variation of plus or minus 10% from the nameplate rating.

(3) have thermal or current overload protection, either built in or in the line starter, to provide locked rotor and running protection.

(h) Emergency shutoff switch. An emergency shutoff switch shall be provided for service personnel to disconnect all power to circulation and jet system pumps. Emergency shut-off switches shall be accessible to operators, and located within sight of the lagoon.

Section 265.159 Suction Outlets, Gravity Flow Systems, and Return Inlets

(a) For the purpose of this section, skimmers are not considered to be suction outlets.

(b) Licensed Engineer. Suction outlet systems, gravity flow systems, and return systems constructed on or after the effective date of these rules shall be planned and designed by a licensed engineer.

(c) Submerged suction outlets. Fully submerged suction outlets (main drains) are not required.

(d) Entrapment protection. Suction outlet systems shall be designed to protect against suction entrapment, evisceration, and hair entanglement/entrapment hazards in accordance with ANSI/APSP-16, American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins.

(e) Suction outlets. Where suction outlets are provided they shall comply with the following:

(1) Suction outlet covers, grates and fittings shall be compliant with the VGBA.

(2) At least two hydraulically balanced VGBA-compliant suction outlets shall be provided per pump suction line.

(3) Suction outlets installed in water 4 feet deep or less shall be unblockable such that its perforated (open) area cannot be shadowed by the area of the 18-inch x 23-inch Body Blocking Element as described in ANSI/APSP-16, American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins.

(4) The distance between hydraulically balanced VGBA-compliant suction outlets, as measured inside edge of the fitting to the inside edge of the fitting of the other outlet(s), shall be no less than 3 feet and no more than 5 feet.

(5) The flow rating of each suction outlet cover or grate shall be at least equal to the system's maximum flow rate.

(6) No means of isolating hydraulically balanced suction outlets is permitted that could allow one suction outlet to serve as the sole source of water to a pump.

(7) A single pipe to a pump suction inlet that serves two or more suction outlets may have a valve to shut off the flow to the pump.

(f) Water velocity in pipes. Water velocity in pipes in a pump-suction hydraulic system shall not exceed 6 feet per second (fps) when 100% of the pump flow comes from the suction outlet system and any suction fitting in the suction outlet system is blocked. When one suction fitting in the suction outlet system is blocked the flow rate through fitting, cover, or grate shall not exceed the approved flow rate for that fitting and cover or grate.

(g) Closure when suction outlet cover broken, missing or loose. If the cover or grate on a suction outlet including a vacuum outlet is missing, broken or loose, the lagoon shall be closed immediately. It shall remain closed until a proper repair is made or replacement is installed.

(h) Return inlets. Return inlets shall be designed so as not to constitute a hazard to the user.

(i) Automatic cleaners. An automatic bottom or side cleaner that could provide a means of entanglement or entrapment shall not be operated in areas occupied by users.

Sections 265.160. Surface Skimming and Perimeter Overflow (Gutter) Systems

(a) Licensed engineer. Surface skimming and perimeter overflow (gutter) systems constructed on or after the effective date of these rules shall be planned and designed by a licensed engineer.

(b) Surface skimming design. Surface skimming systems or perimeter overflow systems shall be planned and designed as required in §265.159 of this chapter and shall be capable of providing 100% of the design system flow.

(c) Safe design of surface skimming and perimeter overflow systems. Surface skimmers and perimeter overflow systems shall be designed and installed to prevent body and limb entrapment.

(d) Effective skimming action maintained. Surface skimmers shall be located to maintain effective skimming action throughout the lagoon.

(e) Hydraulic capacity of perimeter overflow system. The hydraulic capacity of a perimeter overflow (gutter) surface skimming system shall be capable of handling 100% of the circulation flow.

Section 265.161 Electrical Requirements

(a) Licensed designer. Electrical systems installed on or after the effective date of these rules shall planned and designed by a licensed engineer or licensed master electrician.

(b) Compliance with National Electrical Code (NEC). All electrical equipment and lines shall comply with applicable provisions in the current NEC in effect on the date of installation.

(c) Testing laboratory approval. Electrical equipment shall be approved by a nationally recognized electrical testing laboratory, such as Underwriters Laboratories, at the time of installation as evidenced by the listing or labeling on the equipment.

(d) Grounding and bonding. Equipment, as required, shall be bonded and grounded in accordance with the NEC in effect at the time of installation. Pumps shall be both internally and externally grounded.

(e) Manufacturer's instructions. Electrical equipment and related electrical components shall comply with manufacturer's installation instructions.

(f) Line clearances. Electrical line clearances shall comply with the National Electrical Safety Code or National Electrical Code in effect at the time of construction.

(g) Inspections required. For an artificial swimming lagoon constructed on or after the effective date of these rules, a licensed electrician shall conduct at least two inspections, one during construction and one after construction, to ensure that all electrical facilities are constructed in compliance with this section.

(h) Emergency shutoff switch. An emergency shutoff switch shall be provided for service personnel to disconnect all power to circulation and jet system pumps. Emergency shutoff switches shall be accessible to operators, and located within sight of the lagoon.

Section 265.162 Water Supply

(a) Water Supply. For an artificial swimming lagoon constructed on or after the effective date of these rules, the initial fill water and make-up water shall come from a public water system as defined by 30 TAC §290.38 or from a well that complies with the requirements of subsection (d).

(b) No direct connection. No direct mechanical (hard) connection shall be made between the lagoon, the chemical treatment equipment, or the system of piping and the sanitary sewer system, septic system, or other wastewater disposal system.

(c) Water distribution system. All portions of the water distribution system shall be protected against backflow and back siphonage using a high hazard preventer such as a reduced-pressure-principle backflow preventer meeting the requirements of the American Society of Sanitary Engineering ASSE Standard 1013 2013, as amended, and approved for use in potable water systems possibly subjected to back siphonage or high back pressure or an air gap designed to ASME Standard A112.1.2.

(d) Private water supply. If the water supply providing water to the artificial swimming lagoon does not meet the definition of a public water system, that water supply shall comply with the following requirements.

(1) Water pressure. The system shall:

(A) be designed to maintain a minimum pressure of 35 pounds per square inch (psi) at all points within the distribution network at flow rates of at least 1.5 gallons per minute per connection.

(B) be designed to maintain a minimum pressure of 20 psi under combined fire and drinking water flow conditions when the system is intended to provide firefighting capability; and

(C) maintain a minimum distribution pressure not be less than 20 psi at any time.

(2) Bacteriological properties. Coliform testing of the well water shall be performed each month the lagoon is open for use. Records of any bacteriological tests of the well water shall be kept on site for two years and made available during inspection.

(3) Chemical properties.

(A) Water samples for chemical analysis obtained from the entry point to the distribution system shall be submitted to a laboratory certified by the Texas Commission on Environmental Quality once every 3 years.

(B) The chemical analysis shall be for secondary constituent levels as set out by 30 TAC §290.118.

(C) Records of all chemical testing shall be kept on site for three years and made available during inspection.

(f) Hose bibs. Hose bibs shall be protected with a vacuum breaker.

Section 265.163 Drinking Water, Food, Beverages and Containers

(a) Drinking water available. Drinking water shall be provided and available to users at all areas of the lagoon.

(b) Location of water lines. Location of water lines in relation to wastewater lines shall be in compliance with 30 TAC, §290.44.

(c) Food and beverages. Food and beverages may be consumed in the lagoon only if it is privately owned and operated. Consumption of food and beverages in an artificial swimming lagoon that is not privately owned and operated is prohibited.

(d) Non-breakable containers. Food and beverages shall be served only in non-breakable containers. Glass containers shall not be allowed on a deck, in the lagoon or anywhere within the enclosure.

(e) Trash containers. Covered trash containers shall be provided where food and beverages are allowed or served.

Section 265.164 Wastewater Disposal

(a) Discharge or disposal. Filter backwash water and drainage water that is not reused in the lagoon shall be discharged or disposed of in accordance with the requirements of the Texas Commission of Environmental Quality or local regulatory authority.

(b) No direct connection. There shall be no direct physical connection between a wastewater disposal system and a drain or recirculation system. Backwash water and lagoon draining water shall be discharged through an air gap formed by positioning the discharge pipe opening at least two pipe diameters above the overflow level of any barriers that could cause flooding and submergence of the discharge opening or by other means in accordance with TCEQ requirements. Splash screening barriers are permitted as long as they do not destroy air gap effectiveness.

(c) On-site sewage facility wastewater disposal lines. On-site sewage facility wastewater disposal lines shall be located in compliance with 30 TAC, §285.31 (relating to Selection Criteria for Treatment and Disposal Systems) or local regulatory requirements.

(d) Other wastewater or drainage water disposal facilities or lines. The location of other wastewater disposal facilities or lines shall meet applicable standards of 30 TAC, Chapter 307, Texas Surface Water Quality Standards, Chapter 308, Criteria and Standards for National Pollutant Discharge Elimination System, Chapter 311, Watershed Protection, and Chapter 315, Pretreatment Regulations for Sources of Pollution, or local regulatory authority.

Section 265.165 Disinfectant Equipment

(a) Design requirement. Disinfectant equipment and systems constructed on or after the effective date of these rules shall be planned and designed by a licensed engineer.

(b) Disinfectant agent. Lagoon water shall be continuously disinfected by a disinfectant agent whose residual can be easily measured by simple and accurate field tests.

(c) Training and protection. Personnel responsible for the operation of the disinfectant agent and other potentially hazardous chemicals shall be properly trained and provided with appropriate protective equipment and clothing, including rubber gloves and goggles, and safety information.

(d) Monitoring controllers. Automated controllers shall be installed for monitoring and turning on or off chemical feeders used for pH and disinfectants.

(e) Instructions. Operation manuals or other instructions that give clear directions for cleaning and calibrating automated controller probes and sensors shall be kept in close proximity to the automated controller.

(f) Storage.

(1) Disinfectant agents and other chemicals and feed equipment shall be stored so that users do not have access.

(2) Dry chemicals shall be stored off the floor in a dry, above-ground-level room and protected against flooding or wetting from floors, walls, and ceiling.

(3) Chlorine compounds shall not be stored in the same storage room or storage area as petroleum products.

(g) Labeling. All chemical bulk and day tanks shall be clearly labeled to indicate the tank's contents.

(h) Chlorine gas prohibited. Use of compressed chlorine gas is prohibited.

Section 265.166 Water Quality

(a) FIFRA registration. Sanitizers, disinfectants, and other chemicals used to treat the water shall be Environmental Protection Agency (EPA) registered under Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) if they are pesticides as defined by the EPA.

(b) NSF/ANSI listing. Non-pesticide chemicals used to treat the water shall be listed and labeled to NSF/ANSI Standard 50 or NSF/ANSI Standard 60.

(c) Manufacturer's instructions. Chemicals shall be used according to the manufacturer's instructions.

(d) Required water quality. Unless an alternate form of disinfectant has been approved by the Department, water quality shall meet the criteria in Figure 265.166(d) at all times the lagoon is open:

(e) Water clarity. Water clarity shall be sufficient such that an 8-inch black disk or Secchi Disk on the floor at the deepest part of the lagoon can be clearly and immediately seen by an observer on the water surface above the disk or by someone standing on the shore closest to the disk.

(f) Swimming area testing frequency.

(1) When the swimming area of the lagoon is open, tests for sanitizer levels (free available chlorine, bromine) and pH shall be made in each of the swimming areas at least three times a day. One of the tests for sanitizer levels and pH shall be made prior to opening.

(2) Test samples in the swimming area shall be taken where the water is a minimum of three feet in depth.

(g) Non-swimming area testing and frequency.

(1) When the non-swimming area of the lagoon is open, tests for sanitizer levels (free available chlorine, bromine) and pH shall be made at least three times a day. One of the tests for sanitizer levels and pH shall be made prior to opening.

(2) Test samples in the non-swimming area of the lagoon shall be taken at a minimum of two locations located on opposite sides of the lagoon.

(h) ORP reading frequency. Where in-line Oxidation Reduction Potential (ORP) meters are used, readings shall be recorded at the same time sanitizer and pH tests are performed.

(i) Alkalinity testing frequency. When a lagoon is open, tests for alkalinity shall performed weekly and tests for calcium hardness shall be performed each month.

(j) Reliable testing methods required. A reliable means of testing for pH, free available chlorine, combined chlorine, cyanuric acid (if used), bromine, alkalinity, calcium hardness, shall be maintained for artificial swimming lagoons. The test method shall be capable of measuring chemical ranges as detailed in subsection (d).

(k) DPD chemical test. Free available chlorine levels shall be determined by the use of the DPD method or its equivalent.

(l) Proper storage of test kits and reagents. Test kits and reagents shall be stored according to the manufacturer's instructions and protected from extreme heat and cold and from exposure to water, chemicals, petroleum products or any other element or environment that could adversely affect the efficacy of water quality test results.

(m) Refreshing testing reagents. Test reagents shall be changed at frequencies recommended by the manufacturer to assure accuracy of the tests.

(n) Chemical balance. Water shall be chemically balanced. Testing methods to determine the chemical balance of the water in the artificial swimming lagoon, such as the Langelier Saturation Index (LSI), shall be conducted once a week at a minimum.

(o) Operation record retention. Operational records, including results of required chemical testing under this section, shall be kept for two years and be made available during an inspection.

(p) Off-season chemical levels. When a lagoon is not in use for at least 30 days (such as off season), clarity shall be maintained and algae growth shall be prevented, however, other water quality parameters as required in this section need not be maintained.

Section 265.167 Alternate Method of Disinfectant

(a) Application. An owner or operator may apply to use an alternate method of disinfectant as a substitute to meeting the water quality requirements of Health & Safety Code, §341.064(b), and §265.166(d) of this chapter, pertaining to Water Quality.

(b) Submission. A completed application for use of an alternate method of disinfectant must be submitted to the Department, Consumer Safety Section, no later than 180 days prior to the opening date of the lagoon. The application shall include:

(1) the type and level of primary disinfectant;

(2) the type and level, where applicable, of any supplemental method of water treatment;

(3) the equipment and methods used for storing, delivering, and measuring primary disinfectant levels and supplemental water treatment levels;

(4) data supporting the effectiveness of the primary disinfectant and the supplemental method of water treatment in maintaining required water quality;

(5) descriptions of any specialized equipment, application methods, or other water treatment methods that may differ from the requirements in §265.166 of this chapter, pertaining to Water Quality;

(6) a proposed testing schedule for determining levels of microorganisms and chemicals as specified by the Department to ensure the health and safety of the public;

(7) a detailed drawing or map of the lagoon that indicates swimming and non-swimming areas; and

(8) any additional information the Department requires to make its decision.

(c) Decision. The Department shall approve or reject a request to use an alternate method of disinfectant no later than the 90th day after date the completed application is submitted.

(d) Additional information. If the Department requires additional information to make its decision, the application is not considered completed for purposes of subsections (b) and (c) of this section until the Department receives the additional information.

§265.168 Enclosures

(a) Enclosure required. An artificial swimming lagoon shall be enclosed by a fence, wall, or barrier that meets the requirements in this subsection.

(b) Minimum height. The enclosure, including doors and gates, shall have a minimum perpendicular height of at least 6 feet as measured from the ground surface on the outside of the fence.

(c) Openings. The enclosure shall have no openings in, through, or under it, which would allow a 4-inch diameter sphere to pass.

(d) An enclosure constructed with horizontal and vertical members with the distance between the tops of the horizontal members less than 48 inches, shall have openings that may not allow a sphere 1-3/4 inches in diameter to pass through the enclosure.

(e) The enclosure shall be designed and constructed so that it cannot be readily climbed. Structures, light poles, trees, or any other object that could make the enclosure easy to climb shall be a minimum of 3 horizontal feet distance from the exterior of the fence.

(f) Entry gates, doors and windows. All entry gates and doors shall open outward away from the lagoon and shall comply with the following:

(1) Entry doors, gates, and windows in the enclosure shall be directly and continuously supervised by staff during hours of operation, or locked to prevent unauthorized entry; or

(2) entry doors and gates shall have hand-activated opening hardware.

(3) Entry doors and gates shall have hardware enabling them to be locked, by a padlock or built-in lock.

(g) Latching devices. Entry doors and gates shall be equipped with self-closing and self-latching devices that keep the gate or door securely closed and within its range of operation. A gate latch shall be installed on entry gates and doors so that it is at least 60 inches above the ground, except that it may be installed lower if:

(1) the latch is installed on the lagoon side of the gate only; and

(2) the gate or enclosure has no openings greater than one-half inch in any direction within 18 inches from the latch, including the space between the gate and the gate post to which the gate latches; or

(3) a gate latch may be located 42 inches or higher above the ground if the gate cannot be opened except by key, card, or combination from either side of the gate.

(h) Building. A building that serves as part of the enclosure shall have doors or gates that access the yard of the lagoon constructed on or after the effective date of these rules only if:

(1) any doors or gates between the building and the artificial swimming lagoon yard are for entry into a storage room, restroom, shower room, dressing room, or mechanical room adjacent to the lagoon; and

(2) the room does not have any door or gate openings to the outside of the enclosure.

§265.169 Safety Features

(a) Safety equipment. Safety equipment shall have its function plainly marked and shall be kept in ready condition at all times the lagoon is open for use.

(b) Boundaries. Boundaries shall be designated as follows:

(1) Boundaries for swimming or wading areas of the lagoon shall be marked by a buoy line with floats.

(2) The buoy line's floats or buoys shall be at regular intervals, no further than 25 feet apart and where lines are joined.

(3) Clearly visible depth marker buoys shall be provided on the boundary float line indicating the following depths below the depth marker buoy:

(A) the maximum depth; and

(B) at the point where the depth exceeds 3 feet, 6 inches; and

(C) at the 5-foot depth if the depth of the swimming area exceeds 5 feet.

(c) Vessel and motorboat safety.

(1) Ignitable fuel prohibited. Motorboats using any ignitable propellant or fuel such as gasoline, kerosene, propane, or alcohol are prohibited.

(2) Personal floatation devices.

(A) Each vessel or motorboat passenger under 13 years of age shall be required to wear a United State Coast Guard (USCG)-approved personal floatation device while the vessel or motorboat is underway. A life belt, floaties, or a ring buoy does not satisfy this requirement.

(B) An adult operator of a vessel or motorboat may not permit a person under 13 years of age to be on board the vessel or motorboat while the vessel or motorboat is under way if the person is not wearing a USCG-approved personal floatation device.

(C) No person shall be prohibited from the use of a personal flotation device.

(d) Safety signs. Lagoon safety signs shall comply with the following:

(1) Signs shall be securely mounted.

(2) Signs shall be easily readable to the user from all areas of the lagoon and have a minimum letter, symbol, and number height of 3 inches.

(3) All letters, numbers, and symbols on the signs shall be in contrasting color to the background and easily read.

(4) Required signs in the swimming area:

(A) Days and hours of operation;

(B) “Non-Service Animals Prohibited”;

(C) “Glass Containers Prohibited”;

(D) “Entering the Lagoon if Ill with Diarrhea is Prohibited”;

(E) “Changing Diapers Within 6 Feet of the Lagoon is Prohibited”;

(F) “In Case of Emergency Dial 911”;

(G) “No Swimmers Allowed Outside the Swimming Area”

(H) “No Diving” and the international symbol for no diving; where water depths are less than 9 feet; and

(I) Maximum user load.

(5) Required signs in the non-swimming area:

(A) Days and hours of operation;

(B) “Non-Service Animals Prohibited”;

(C) “Glass Containers Prohibited”;

(D) “Entering the Lagoon if Ill with Diarrhea is Prohibited”;

(E) “Changing Diapers Within 6 Feet of the Lagoon is Prohibited”;

(F) “In Case of Emergency Dial 911”;

(G) “Motorboats and Vessels Are Prohibited in Swimming Area(s)” at lagoons where vessels or motorboats are allowed;

(H) “No Diving” and the international symbol for no diving, where water depths are less than 9 feet; and

(I) Maximum user load.

(6) Where lifeguards are not provided or are not required the following signs are also required:

(A) “Warning - No Lifeguard on Duty”; and

(B) “No Diving” and the international symbol for no diving.

(7) The required notifications may be mounted on individual signs or combined on one sign.

(e) Night swimming prohibited. Night swimming, from one-half hour before sunset to one-half hour after sunrise, shall be prohibited unless lighting is provided as required in subsection (f).

(f) Lighting Requirements. If an artificial lagoon is open for night swimming or during periods of low illumination, the lagoon surface lighting shall:

(1) maintain lagoon surface lighting levels at a minimum of 15 horizontal footcandles (161 lux); and

(2) illuminate all parts of the lagoon open for use one, including the water, the depth markers, signs, entrances, restrooms, safety equipment, the deck areas, walkways, and any area occupied or in use.

(3) Underwater lighting is not required. Where provided, underwater lighting shall not be less than 8 initial rated lumens per square foot of lagoon water surface area.

(g) Ring buoy, throw rope, and reaching pole. A lagoon shall have at least one ring buoy with throwing rope and a reaching pole at each swimming area and at each area that provides access to motorboats or vessels.

(1) The reaching pole shall be in the immediate vicinity of the water and accessible to users.

(2) The reaching pole shall be light, strong, non-telescoping, and at least 12 feet long. The pole shall be constructed of fiberglass or other material that does not conduct electricity and shall have a body hook or shepherd’s crook with blunted ends attached.

(3) The throwing rope shall be 1/4-inch to 3/8-inch diameter, with a length at least two-thirds of the width of the swimming area. An USCG-approved ring buoy with an outside diameter of at least 20 inches shall be attached to the throwing rope.

(h) Safety equipment. Safety equipment, including ring buoys and rope, floating lines with buoys, emergency communication equipment, backboards with tie downs and head supports, first aid kits, and required signs, shall be maintained in good condition and in good working order.

(i) Emergency telephone. The artificial swimming lagoon shall have a minimum of two emergency telephones, commercial emergency contact devices, or alternative communication systems that are capable of immediately summoning emergency services and that are readily accessible, within 200 feet of the water, and are functioning at all times the lagoon is open. Clear operating instructions shall be provided.

(1) A fixed location telephone, commercial emergency contact device, or alternative communication system shall be visible, have no obstruction to access, and have some method of identification that enables the telephone or other device or system to be easily identified by users.

(2) A telephone or emergency contact device may not be answered by an onsite office. The alternative communication system may not be answered by an onsite office unless the alternative communication system complies with paragraph (5) of this subsection.

(3) A telephone shall be capable of making outside calls, including to 911 dispatch or emergency medical services.

(4) A commercial emergency contact device, when activated, shall directly connect to a 24-hour monitoring service, or directly to 911 dispatch or emergency medical services.

(5) An alternative communication system that contacts an onsite office may be used if the lagoon is in a remote area with limited or delayed emergency medical services response times, and it has employees trained and certified or licensed to perform emergency medical intervention that are on-site when the lagoon is open.

(6) At least one emergency telephone, commercial emergency contact device, or alternative communication system device shall be located within 200 feet of each swimming area.

265.170 Lifeguard Requirements

(a) Waterfront supervision. A water front manager/director who holds a current lifeguard certificate or its equivalent shall be required to manage and direct all water related activities in the non-swimming and swimming areas.

(b) Lifeguards required. A lagoon shall provide lifeguards if:

(1) alcohol is sold, served, or allowed to be brought in;

(2) motorboats are used or allowed;

(3) the artificial swimming lagoon is open to the general public;

(4) unsupervised children under the age of 14 years are allowed; or

(5) users enter the water from any height above the deck, including from diving boards, drop slides, starting platforms, or climbing walls.

(c) Minimum number. A minimum of two lifeguards shall be provided for each swimming area and a minimum of one lifeguard shall be provided for every 150 linear feet of shore of each non-swimming area when open.

(1) The number of lifeguards shall be sufficient to provide adequate supervision and close observation of all users at all times.

(2) The number of lifeguards shall be sufficient to allow for alternation of tasks such that no lifeguard conducts surveillance activities for more than 60 continuous minutes.

(d) Surveillance. Each lifeguard shall be given an assigned surveillance area commensurate with ability and training.

(e) Other assigned duties shall not distract. Lifeguards conducting surveillance of users shall not be assigned duties that would distract their attention from proper observation of the users, or that would prevent immediate assistance to persons in the water.

(f) In-service training. Lifeguards shall be provided with alertness and response drills and other training including:

(1) a pre-season training program to refresh skills;

(2) a continual "in-service" training program totaling a minimum 60 minutes each week for each lifeguard; and

(3) performance audits as recommended by the ARC or YMCA or equivalent aquatic safety organization.

(g) Records kept on site. The lagoon shall keep records of each lifeguard's certification, including expiration dates and in-service training, for at least three years.

(j) Emergency action plan. An Emergency Action Plan (EAP) shall be developed for the lifeguards and shall contain at a minimum:

(1) a list of emergency telephone numbers;

(2) the location of the first-aid kit and other rescue equipment such as the AED, the BVM, and the backboard;

(3) a response plan for inclement weather such as thunderstorms, lightning, high winds, etc., including evacuation areas; and

(4) a plan following Centers for Disease Control standards for responding to formed-stool contamination, diarrheal-stool contamination, vomit contamination, and contamination involving blood.

(k) Safety equipment. Lifeguards shall have access to safety equipment, including:

(1) An OSHA compliant 24-unit first aid kit housed in a durable weather-resistant container and kept filled and ready for use. The kit shall include disease transmission barriers and cleaning kits meeting OSHA standards.

(2) A number of backboards equipped with a head immobilizer and sufficient straps to immobilize a person to the backboard, in locations sufficient to effect a 2-minute response time to an incident.

(3) At least one portable AED and one BVM kept in a secure location that can be easily and quickly accessed by lifeguards or other trained personnel.

(4) Platforms or stands where water surface area is greater than 2,000 square feet or where the depth of the water is greater than 5 feet are required and shall be provided with a protective umbrella or sunshade high enough to give lifeguards a complete and unobstructed view of the area for which they are responsible.

(l) Personal equipment. Each lifeguard shall be provided:

(1) uniform attire that readily identifies the lifeguard as a staff member and a lifeguard;

(2) a rescue tube;

(3) personal protective devices, including a resuscitation mask with one-way valve and non-latex, non-powdered, one-use disposable gloves worn as a hip pack or attached to the rescue tube; and

(4) a whistle or other signaling device for communicating to users, other lifeguards, or staff.

§265.171 Operation and Management

(a) Required certification. An artificial swimming lagoon shall be maintained under the supervision and direction of a properly trained and certified operator who is responsible for the sanitation, safety, proper maintenance of the lagoon, and for maintaining all physical and mechanical equipment and records. Training and certification can be obtained by completion of one of following courses or their equivalent:

(1) the National Recreation and Parks Association, “Aquatic Facility Operator” (APO);

(2) the National Swimming Pool Foundation, “Certified Pool Operator” (CPO);

(3) the Association of Pool and Spa Professionals “Professional Pool & Spa Operator” (PPSO); or

(4) the American Swimming Pool and Spa Association, “Licensed Aquatic Facility Technician” (LAFT).

(b) Water clarity. The artificial swimming lagoon shall be opened for use only when the bottom at the deepest point of the lagoon is clearly visible. Visual occlusion by sediment or other matter shall be checked before opening and periodically, as necessary, while the lagoon is in use. Clarity shall be observed between one and five minutes after users have exited. Sediment shall be removed as needed prior to allowing re-entry by users into the lagoon.

(c) Closure signs required. When the artificial swimming lagoon is closed for the season or for any other reason other than during normal operating periods, a "Lagoon Closed" sign in letters at least 1 inch in height shall be posted on the exterior side of each entry gate.

(d) Off-season water clarity. When an artificial swimming lagoon is not in use for at least 30 days (such as off season), clarity shall be maintained and algae growth shall be prevented, however, other water quality parameters required by §265.166 of this chapter need not be maintained.

(e) Off-season safety. When an artificial swimming lagoon is not in use after seasonal operation, while under construction or renovation, or for any other reason, the lagoon shall not be allowed to give off objectionable odors, become a breeding site for insects, or create any other nuisance condition or hazard.

(f) Domestic animals prohibited. Domestic animals and other pets shall not be allowed within the enclosure, except that service animals shall be allowed within the lagoon enclosure, but not in the lagoon.

(g) Use of life jackets. No person shall be prohibited from the use of a life jacket.

(h) Protection from chemical exposure. Personnel in charge of maintaining an artificial swimming lagoon shall be properly trained in accordance with §265.165 of this chapter.

(i) Use of chemicals. Use of chemicals shall be according to the chemical manufacturer's directions. No chemical shall be used in a way that violates the manufacturer's instructions for the chemical feed system or the NSF/ANSI 50 or NSF/ANSI 60 certification of the chemical feed system.

(j) Use of registered products. Only chemicals registered and labeled for use in pools, spas, drinking water, and other recreational water aquatic facilities shall be used.

§265.172 Dressing and Sanitary Facilities

(a) Fixture design. Fixtures at dressing and sanitary facilities shall be designed so that they are readily cleanable.

(b) Fixture installation. Fixtures at dressing and sanitary facilities shall be installed in accordance with local plumbing codes and shall be properly protected by backflow connection prevention devices.

(c) Cleaning. Dressing and sanitary facilities shall be cleaned as necessary to maintain sanitary conditions at all times.

(d) Ventilation. Adequate ventilation shall be provided in dressing and sanitary facilities to prevent objectionable odors.

(e) Dressing and sanitary facilities at lagoons open to the general public.

(1) Separate men's and women's dressing and sanitary facilities shall be provided. The rooms shall be well lit, drained, ventilated, and of good construction, using impervious materials. They shall be developed and planned so that good sanitation will be maintained throughout the building at all times. An appropriate number of dressing rooms that can accommodate a family are allowed.

(2) Partitions between portions of the dressing room area, screen partitions, shower, toilet, and dressing room booths shall be of durable material not subject to damage by water and shall be designed so that a waterway is provided between partitions and floor to permit thorough cleaning of the walls and floor areas with hoses and brooms.

(3) Floors shall have slip-resistant surfaces and shall be sufficiently smooth to ensure ease in cleaning. Floor drains shall be provided, and floors shall be sloped a minimum of 1/4 inch per foot toward the drains to ensure positive drainage.

(4) An adequate number of hose bibs and a hose of adequate length shall be provided for washing down all areas of the dressing facility interior. Adequate cross-connection control devices, approved by TCEQ or the local regulatory authority, shall be provided. When not in use, hoses shall be stored in such a manner to prevent a trip hazard.

(f) Lavatories, showers, and toilets at artificial swimming lagoons open to the general public constructed on or after the effective date of these rules.

(1) Lavatory, shower, and toilet facilities shall be located to encourage use of the sanitary facilities by users of the lagoon as follows:

(A) at points of main entry into the enclosure;

(B) within 200 feet of entry/exits into the swimming area; and

(C) no more than 500 feet from entry/exits into the non-swimming area.

(2) The required fixture schedule for lagoons open to the general public is contained in the Figure for Section 265.172(f)(2)

(3) Cleansing showers and lavatories shall be provided with hot and cold running water.

(4) The number of total fixtures required at the lagoon can be distributed between required sanitary facilities within the enclosure of the artificial swimming lagoon.

(g) Lavatories, showers, and toilets at artificial swimming lagoons serving apartments, HOAs, condominiums, hotels or motels, or other mixed-use, privately owned developments shall be located to encourage use of the sanitary facilities by users of the lagoon as follows:

(1) within 200 feet of entry/exits into the swimming areas of the artificial swimming lagoon; and

(2) no more than 500 feet from entry/exits into the non-swimming areas of the lagoon.

(3) The required fixture schedule for lagoons at apartments, HOA's, condominiums, hotels or motels, or other mixed used privately owned developments is contained in the figure for Section 265.172(g)(3).

(4) Lavatories, showers, and toilets in apartments, HOA's, condominiums, hotels or motels, or other mixed use privately owned developments sharing use or ownership of an artificial swimming lagoon may count their public-use sanitary facilities toward the required number of fixtures if in compliance with the figure for Section 265.172(g)(3).

(5) When sanitary facilities are located within an apartment, HOA, condominium, hotel or motel, or other mixed-use, privately owned development sharing use or ownership of the lagoon, a sign shall be posted at each entry/exit in letters at least 3 inches in height stating the location of the nearest available restroom facility.

(h) Additional requirements for all sanitary facilities:

(1) Soap dispensers with liquid or powdered soap shall be provided at each lavatory. The dispenser shall metal or plastic, with no glass permitted.

(2) When provided, mirrors shall be shatter resistant.

(3) Toilet paper holders and toilet paper shall be provided at each toilet.

(4) Covered waste receptacles shall be provided in toilet or dressing room areas.

(5) Single-use hand drying towels or hand drying devices shall be provided near the lavatory.

Section 265.173 Compliance, Inspections, and Investigations

(a) A Department or local regulatory authority shall have the right to enter at all reasonable times any area or environment, including the artificial swimming lagoon facility, building, storage, equipment room, bathhouse, or office to inspect and investigate for compliance with these sections, to review records, to question any person, or to locate, identify, and assess the condition of the lagoon.

(b) Advance notice or permission for entry is not required.

(c) A department or local regulatory authority shall not be impeded or refused entry in the course of his official duties by reason of any company policy.

(d) It is a violation of this chapter for a person to interfere with, deny, or delay an inspection or investigation conducted by a department or a local regulatory authority.

Section 265.174 Enforcement

(a) If a person has caused, suffered, allowed, or permitted a violation of Health and Safety Code §341.064, or this chapter, the department or local regulatory authority may, in accordance with Health and Safety Code, §341.092, assess civil penalties, seek injunctive relief in district court, or both.

(b) A person who has caused, suffered, allowed, or permitted a violation of Health and Safety Code §341.064, or this chapter may also be subject to a criminal penalty under Health and Safety Code, §341.091.

(c) The department or local regulatory authority may take any appropriate legal remedy, including immediately closing the artificial swimming lagoon through voluntary compliance or an injunction.

(d) If an artificial swimming lagoon closes, either voluntarily or by court order, public access to the artificial swimming lagoon shall be restricted and a notice posted notifying the public that the lagoon is closed until further notice.

(e) In case of voluntary closure and upon presentation of evidence that the deficiencies that caused closure have been corrected, operation may be resumed if explicitly authorized by the department or local regulatory authority in writing. Such evidence may be in the form of a reinspection by the regulatory authority, or by other evidence acceptable to the regulatory authority.

Figure for Section 265.166(d)

Disinfectant Level	Minimum	Ideal	Maximum
Free Chlorine	1.0 ppm	2.0 – 3.0 ppm	8.0 ppm
Bromine	2.5 ppm	3.0 – 5.0 ppm	8.0 ppm
Combined Chlorine	None	None	None
pH	Not less than 7.0	7.2 – 7.6	7.8
Cyanuric Acid	None	10.0 – 30.0 ppm	50.0 ppm
ORP	600mV	650 – 750mV	900mV
Alkalinity	50 ppm		180 ppm
Calcium Hardness	150 ppm		1000 ppm
Algae	None	None	None

Figure for Section 265.172(f)(2)

Fixture Schedule	Females	Males
Water Closets	1/50	1/100[1]
Urinals	NA	1/100[1]
Lavatories	1/150	1/150
Cleansing showers[2]	1/100	1/100
Baby Changing Table	1 per sanitary facility	1 per sanitary facility

[1]Where urinals are provided, one water closet less than the number specified may be provided for each urinal installed except the number of water closets shall not be reduced to less than one-half of the minimum specified.

[2]Where tower rinsing showers are provided at the entry/exit into the lagoon, one shower less than the number specified may be provided for each tower rinsing shower except the number of conventional showers shall not be reduced to less than one-half of the minimum specified. Tower rinsing showers are not required to provide heated water.

Figure for Section 265.172(g)(3)

Fixture Schedule	Females	Males
Water Closets	1/50	1/100[1]
Urinals	NA	1/100[1]
Lavatories[2]	1/150	1/150
Rinsing showers[3]	1/200	1/200
Baby Changing Table	1 per sanitary facility	1 per sanitary facility

[1] Where urinals are provided, one water closet less than the number specified may be provided for each urinal installed except the number of water closets shall not be reduced to less than one-half of the minimum specified.

[2] Lavatories shall be provided with hot and cold running water.

[3]Rinsing showers can be tower showers or single showers without heated water, or individual showers with hot and cold running water